

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for adding an acoustic description of a word to a speech recognition lexicon, the method comprising:

converting the text of the word into at least one orthographically derived acoustic description of the word;

generating a score for an orthographically derived acoustic description based in part on a comparison between the orthographically derived acoustic description and a speech signal representing a user's pronunciation of the word;

identifying a speech-based acoustic description of the word and a score for the speech-based acoustic description from decoding the speech signal representing the user's pronunciation of the word to produce a decoded acoustic description of the word and a score for the decoded acoustic description, wherein the speech-based acoustic description is not associated with the text of the word; and

selecting one of the orthographically derived acoustic description and the decoded speech-based acoustic description as the acoustic description of the word based on the score for the orthographically derived acoustic description and the score for the decoded speech-based acoustic description.

2. (Original) The method of claim 1 wherein generating a score for an orthographically derived acoustic description comprises generating an acoustic model score.

3. (Currently Amended) The method of claim 2 wherein ~~decoding the speech signal~~ identifying a score for the speech-based acoustic description comprises generating an acoustic model score for at least one ~~decoded~~ speech-based acoustic description and using the score as at least part of the score for the ~~decoded~~ speech-based acoustic description.

4. (Currently Amended) The method of claim 3 wherein generating an acoustic model score for the orthographically derived acoustic description and generating an acoustic model score for at least one ~~decoded~~ speech-based acoustic description comprises using the same acoustic model to generate both acoustic model scores.

5. (Currently Amended) The method of claim 3 wherein identifying a score for the speech-based acoustic description ~~decoding the speech signal~~ further comprises generating a language model score for the at least one ~~decoded~~ speech-based acoustic description and using the language model score as part of the score for the at least one ~~decoded~~ speech-based acoustic description.

6. (Currently Amended) The method of claim 5 wherein generating an acoustic model score and generating a language model score for at least one ~~decoded~~ speech-based acoustic description comprises generating an acoustic model score and a language model score for a sequence of syllable-like units and wherein the ~~decoded~~ speech-based acoustic description is derived from the sequence of syllable-like units.

7. (Currently Amended) The method of claim 6 wherein deriving the ~~decoded~~ speech-based acoustic description from the sequence of syllable-like units comprises dividing the sequence of syllable-like units into a sequence of phonemes.

8. (Original) The method of claim 6 wherein generating a language model score comprises generating a language model score based on a trigram language model for syllable-like units.

9. (Original) The method of claim 6 wherein generating an acoustic model score for a sequence of syllable-like units comprises generating acoustic model scores for each of a sequence of phonemes that form the sequence of syllable-like units.

10. (Original) The method of claim 1 further comprising displaying a user interface comprising an edit box in which a user may enter the text of the word and a list box that displays words for which an acoustic description has been previously added to the speech recognition lexicon.

11. (Original) The method of claim 10 further comprising:
receiving an indication that a user has selected a word
in the list box;
retrieving the added acoustic description of the word
from the speech recognition lexicon; and
converting the retrieved acoustic description into an
audible signal.

12. (Currently Amended) A computer-readable medium having computer-executable instructions for performing steps comprising:
receiving text of a word for which a phonetic description is to be added to a speech recognition lexicon;
receiving a representation of a speech signal produced by a person pronouncing the word;
converting the text of the word into a text-based phonetic description of the word;

generating a speech-based phonetic description of the word from the representation of the speech signal without using the text of the word; and selecting a phonetic description of the word to add to the speech recognition lexicon by selecting between the text-based phonetic description and the speech-based phonetic description based in part on the correspondence between each phonetic description and the representation of the speech signal.

13. (Original) The computer-readable medium of claim 12 wherein generating a speech-based phonetic description comprises:

generating a plurality of possible phonetic descriptions; using at least one model to score each possible phonetic description; and selecting the possible phonetic description with the highest score as the speech-based phonetic description.

14. (Original) The computer-readable medium of claim 13 wherein using at least one model comprises using an acoustic model and a language model.

15. (Original) The computer-readable medium of claim 14 wherein using a language model comprises using a language model that is based on syllable-like units.

16. (Original) The computer-readable medium of claim 15 wherein each syllable-like unit comprises a sequence of phonemes and wherein using an acoustic model to score a possible phonetic description comprises generating acoustic model scores for each

of the phonemes in a syllable-like unit and summing the acoustic model scores of the phonemes to generate an acoustic model score for the syllable-like unit.

17. (Original) The computer-readable medium of claim 12 wherein:
converting the text of the word into a text-based phonetic description further comprises generating a score for the text-based phonetic description based on the correspondence between the text-based phonetic description and the representation of the speech signal;
generating a speech-based phonetic description further comprises generating a score for the speech-based phonetic description based on the correspondence between the speech-based phonetic description and the representation of the speech signal; and
selecting between the text-based phonetic description and the speech-based phonetic description comprises selecting the phonetic description with the highest score.

18. (Previously Presented) The computer-readable medium of claim 12 wherein the steps further comprise:
receiving an instruction to generate an audible pronunciation of a phonetic description previously added to the speech recognition lexicon;
retrieving the added phonetic description from the speech recognition lexicon; and
causing an audible pronunciation to be generated based on the retrieved phonetic description.

19. (Original) A speech recognition system having a language model generated through a process comprising:

breaking each word in a dictionary into syllable-like units;
for each word, grouping the syllable-like units of the word into n-grams;
counting the total number of n-gram occurrences in the dictionary; and
for each n-gram, counting the number of occurrences of the n-gram in the dictionary and dividing this count by the total number of n-gram occurrences to form a language model probability for the n-gram.

20. (Original) The speech recognition system of claim 19 wherein breaking each word into syllable-like units comprises breaking the words by preferring syllable-like units that occur more frequently in the dictionary over syllable-like units that occur less frequently.

21. (Original) The speech recognition system of claim 20 wherein breaking each word further comprises updating the frequencies of the syllable-like units into which the word is broken.